NILS

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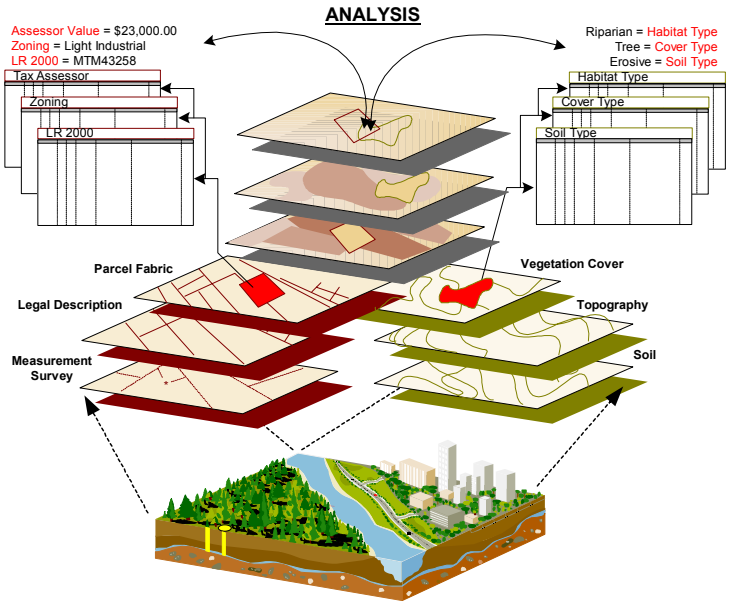
National Integrated Land System

The National Integrated Land System (NILS) is a joint project between the Bureau of Land Management (BLM) and the USDA Forest Service (USFS). NILS will provide a business solution to land managers who face an increasingly complex environment of complicated transactions, legal challenges, and deteriorating and difficult-to-access records.

The BLM and USFS are working in partnership with states, counties, and private industry to develop a common data model and software tools for the collection, management, and sharing of survey data, cadastral data, and land records information. Using geographic information system (GIS) technology, NILS will greatly facilitate cooperative land management and better decision-making among all land managers.

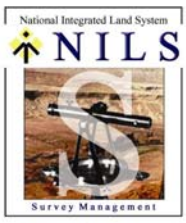
The vision for NILS is to provide a solution that unifies the worlds of surveying and GIS. Implementing this vision will require a common data model, in-field computing tools, a measurement management engine to analyze survey data, and parcel creation and maintenance tools. This integration of surveying and GIS will provide land managers with a complete field-to-fabric technology solution.

To be successful, NILS must meet a diverse set of requirements. It must work in PLSS as well as metes and bounds states. It must work in both urban and rural environments. It must support survey control; yet allow databases to be created based on map control when more precise survey data are not available. It needs to support digitized data, scanned data, GPS data, legal descriptions, orthophotography, documents, and others. Users must be able to customize NILS to accommodate their established workflow and business practices.

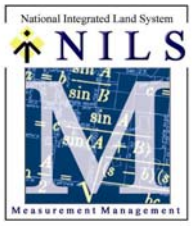


Commercial off-the-shelf (COTS) GIS technology will form the foundation of NILS. Based on industry standards, including the Common Object Model (COM) and object-oriented (OO) technology, the software will provide a modern development platform for NILS. Object-oriented software engineering techniques will be used to extend the COTS to meet the specific needs of NILS users.

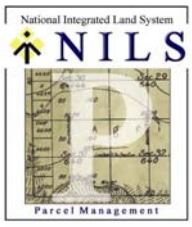
The NILS project has four major components:



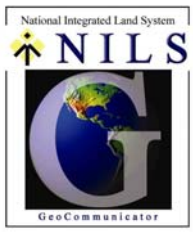
Survey Management is a set of applications that provides surveyors with the ability to manage survey data collected in the field. It allows for exporting data to a variety of survey equipment and for importing data back into the Survey database. GIS, raster, and field data are all integrated for data validation and decision making while in the field. Survey Management provides field surveyors with tools to research survey data that can be taken into the field and assist in the calculation of field data and observations. As part of the NILS solution, the Land Survey Information System (LSIS) Web site **www.geocommunicator.gov/lsi** provides a means for distributing land survey boundary data to the public.



Measurement Management is a desktop GIS application that allows surveyors to analyze and adjust surveyed data from the field. Measurement Management allows the combination of measurement data from a variety of sources and reliabilities to create a seamless measurement network. Measurement Management contains a suite of mathematical formulas that allows the transformation of raw survey data into the measurement network. This is referred to as the legal description fabric. The legal description fabric can then be used to create the parcel fabric, which can be used by land managers for decision-making.



Parcel Management is a desktop GIS application that provides tools for land managers to create and manage parcel features and their legal area descriptions. The parcel fabric is vertically integrated with survey features captured and managed using the Survey and Measurement Management applications. Through this vertical integration, changes in the survey fabric can trigger changes to the legal description and parcel fabrics. A set of tools for standardizing and facilitating land management workflow processes will be provided with the parcel management suite of tools.



GeoCommunicator is an Internet Web site for cadastral survey and land management information and data including the distribution of the Public Land Survey System (PLSS), other survey-based data, federal land ownership status, and federal land management agency information. GeoCommunicator's search and access functionality for geospatial data will be phased out as a new Internet portal, Geodata.gov, comes online as the new E-government Web site for geospatial data. The GeoCommunicator Web site is located at **http://www.geocommunicator.gov**.

NILS is being designed, developed, and released using an incremental implementation lifecycle methodology. Functionality is being prioritized and delivered to users in successive stages, rather than waiting until the entire system is developed. Module Dates: FY2001 - GeoCommunicator; FY2002 - Survey Management; FY2002 - Measurement Management; FY2003 - Parcel Management.

For more detailed information, visit the NILS project Web site at **http://www.blm.gov/nils**
Contact the NILS project by Email: **wo-nils@blm.gov** or contact the BLM by phone: **(303) 236-0815.**

On January 7, 1998 the BLM and USFS signed a memorandum entitled "Bureau of Land Management-Forest Service Partnership for Land Management and Customer Services." This became known as the "Service First" initiative. Subsequently, sponsors from the BLM and USFS signed a Partnership Agreement for an ALP/ALMRS Joint Development Project on June 11, 1998. Additionally, a Project Charter was signed in March 1999 by the project sponsors, and with approval of the charter, the project was renamed the National Integrated Land System.